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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,042	12/19/2001	Neeman Malek	UBI071	3644

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EXAMINER	
HO, THOMAS Y	

ART UNIT	PAPER NUMBER
3677	

DATE MAILED: 03/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/029,042	MALEK ET AL.
	Examiner	Art Unit
	Thomas Y Ho	3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi USPN5383303 in view of Decker USPN2851721.

As to claim 1, Nakanishi discloses:

- A torsion spring 15 having a first end and a second end.
- A spiral rod 11 having a first end and a second end.
- A threaded follower 10 mounted on said spiral rod for being rotated by said spiral rod when said follower is moved along said spiral rod between the first end and the second end of said spiral rod.
- Said threaded follower being attached to the first end of said torsion spring for rotating the first end of said torsion spring by rotation of said follower.
- First means (near 13) for attaching the second end of said torsion spring to a window frame for moving said spiral rod through said follower by moving the sash.
- Second means 32 for attaching the first end of said spiral rod to a window sash against rotation of said spiral rod.

- Said second means for attaching comprising means for rotating (fig.15) said spiral rod for changing base force in said torsion spring. The spiral rod is fixedly attached to rotatable mount 32 for adjusting base force (col.5, ln.20-37; col.6, ln.35-68).

Nakanishi fails to disclose or suggest:

- First means for attaching the second end of said torsion spring to a window sash for moving said follower along said spiral rod by moving the sash.
- Second means for attaching the first end of said spiral rod to a window frame against rotation of said spiral rod.

Decker discloses a first means for attaching the second end of a torsion spring 23 to a window sash 11 for moving a follower 27 along a spiral rod 21 by moving the sash, and also a second means for attaching the first end of a spiral rod to a window frame 14 against rotation of the spiral rod (Decker discloses that the spiral rod is stationary and the followers are moved along the rod as the sash is raised or lowered), because moving the spiral rod between followers requires extremely large or rigid rods, and normal rods would be apt to bend with use (col.1, ln.45-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the torsion spring disclosed by Nakanishi to be mounted to a sash, and for the spiral rod disclosed by Nakanishi to be mounted to a frame, as taught by Decker, to reduce the rod size necessary and prevent bending.

Claims 2-6, 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi USPN5383303 in view of Decker USPN2851721, and further in view of Kishimoto JP2001055861A.

As to claims 2, 5-6, Nakanishi in view of Decker discloses:

- Said means for rotating (fig.15) said spiral rod 11 comprising a rotatable mount 32 connected to said spiral rod for rotating said spiral rod (col.5, ln.20-37; col.6, ln.35-68).

Nakanishi in view of Decker fails to disclose or suggest:

- Said means for rotating comprising a first gear.
- A second gear axially connected to said spiral rod for rotating said spiral rod, rotationally engaged with said first gear for being rotated by said first gear.
- Said first gear has an axis that is normal to the axis of said second gear.

Kishimoto discloses a means for rotating comprising a first gear 23, and a second gear 26 rotationally engaged with said first gear for being rotated by said first gear, with the axes of the first and second gears being normal to one another, and also a gear bearing 6 comprising means for attaching said gear bearing to a window frame, having a first gear mounted in said gear bearing, with a second means (insert) provided in a keyed hole for receiving an external rotational force 25 to the first gear for rotating the first gear, the second means having a means for urging 24 from a first position to a second position, and a means 21b mounted on the gear bearing for contacting said second means for preventing rotation when the second means is in a second position, to perform adjustment of a balancing force steppingly and easily without being forced to take a painful working posture. It would have been obvious to modify the means for rotating the spiral rod disclosed by Nakanishi to comprise of a first gear, as taught by Kishimoto, for easier adjustment of the balancing force.

As to claim 3, Nakanishi in view of Decker discloses:

- A third means 63 for receiving external rotational force (col.6, ln.27-34), mounted on said means for rotating (rotatable mount 32), keyed to said means for rotating, for rotating said means for rotating.

As to claim 4, Nakanishi in view of Decker discloses:

- A means for locking 50 said third means 63 against rotation.

As to claim 8, Nakanishi in view of Decker discloses:

- A torsion spring 15 having a first end and a second end.
- A spiral rod 11 having a first end and a second end.
- A threaded follower 10 mounted on said spiral rod for being rotated by said spiral rod when said follower is moved along said spiral rod between the first end and the second end of said spiral rod.
- Said threaded follower being attached to the first end of said torsion spring for rotating the first end of said torsion spring by rotation of said follower.
- First means for attaching the second end of said torsion spring to a window sash for moving said follower along said spiral rod by moving the sash.
- A bearing assembly 16 comprising means for attaching said bearing assembly to a window frame against rotation of said gear bearing.
- A first means for rotating, mounted in said bearing assembly, connected to said spiral rod for rotating said spiral rod.

As to claim 9, Nakanishi in view of Decker discloses:

- A window frame.

- A window sash movably mounted in said window frame.
- A torsion spring 15 having a first end and a second end.
- A first means for rotation 32, mounted in a bearing assembly 16, connected to the first end of a spiral rod 11 for rotating said spiral rod.
- A threaded follower 10 mounted on said spiral rod for being rotated by said spiral rod when said follower is moved along said spiral rod.
- Said threaded follower being attached to the first end of said torsion spring for rotating the first end of said torsion spring by rotation of said follower.
- The second end of said torsion spring being mounted on said sash against rotation of said second end of said torsion spring, for moving said follower along said spiral rod by moving said sash.

As to claim 10, Nakanishi in view of Decker discloses:

- A window frame.
- A window sash movably mounted in said window frame.
- A gear bearing 16 mounted on said window frame against rotation of said gear bearing.
- A torsion spring 15 having a first end and a second end.
- A first gear, mounted in said gear bearing, connected to the first end of a spiral rod for rotating said spiral rod.
- A threaded follower 10 mounted on said spiral rod for being rotated by said spiral rod when said follower is moved along said spiral rod.

- Said threaded follower being attached to the first end of said torsion spring for rotating the first end of said torsion spring by moving said sash.
- Means for longitudinal engagement 32 connected to said gear bearing 16 and to said second end of said torsion spring (connected through rod 11 and follower 10), configured for prevention of differential rotational movement between said gear bearing and said second end of said torsion spring when said second end of said torsion spring is moved between a first distance and a second distance from said gear housing. The braking means in gear bearing 16 prevents rotation between the gear bearing and the torsion spring upon movement of the torsion spring.

As to claim 11, Nakanishi in view of Decker discloses:

- A torsion spring 15 having a first end and a second end.
- A spiral rod 11 having a first end and a second end.
- A threaded follower 10 mounted on said spiral rod 11 for being rotated by said spiral rod when said follower is moved along said spiral rod between the first end and the second end of said spiral rod.
- Said threaded follower being attached to the first end of said torsion spring for rotating the first end of said torsion spring by rotation of said follower.
- First means for attaching the second end of said torsion spring to a window frame for moving said spiral rod through said follower by moving the sash.
- A bearing housing 16 comprising means for attaching said bearing housing to a window sash.

- A first means for rotation 32 mounted in said housing, axially connected to said spiral rod for rotating said spiral rod.

As to claim 12, Nakanishi in view of Decker discloses:

- A window frame.
- A window sash movably mounted on said window frame.
- A torsion spring 15 having a first end and a second end.
- A spiral rod 11 having a first end and a second end.
- A threaded follower 10 mounted on said spiral rod for being rotated by said spiral rod when said follower is moved along said spiral rod between the first end and the second end of said spiral rod.
- Said threaded follower being attached to the first end of said torsion spring for rotating the first end of said torsion spring by rotation of said follower.
- The second end of said torsion spring being mounted on said window frame for moving said follower along said spiral rod by moving the sash.
- A bearing housing 16 attached to said window sash.
- A first means for rotation 32 mounted in said housing, axially connected to said spiral rod for rotating said spiral rod.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi USPN5383303 in view of Decker USPN2851721, and further in view of Kishimoto JP2001055861A, and further in view of Davis USPN5152032.

As to claim 7, Nakanishi in view of Decker, and further in view of Kishimoto discloses:

- A torsion spring 15 having a first end and a second end.

- A spiral rod 11 having a first end and a second end.
- A threaded follower 10 mounted on said spiral rod for being rotated by said spiral rod when said follower is moved along said spiral rod between the first end and the second end of said spiral rod.
- Said threaded follower being attached to the first end of said torsion spring for rotating the first end of said torsion spring by rotation of said follower.
- First means for attaching the second end of said torsion spring to a window sash for moving said follower along said spiral rod by moving the sash.
- Second means for attaching the first end of said spiral rod to a window frame against rotation of said spiral rod.
- Said second means for attaching comprising means for rotating said spiral rod for changing base force in said torsion spring.

Nakanishi in view of Decker, and further in view of Kishimoto fails to disclose or suggest:

- A tension spring having a first end connected to said first means for attaching, and having a second end connected to said second means for attaching.
- A means for longitudinal engagement for prevention of differential rotational movement, connected to said first means for attaching and to said second means for attaching, for prevention of differential rotational movement between the first end of said tension spring and the second end of said tension spring when said first means for attachment is moved between a first distance and a second distance from said second means for attachment.

Davis discloses a tension spring 24 having a first end connected to a first means 28 for attaching and a second end connected to said second means for attaching 16 and means for longitudinal engagement, because tension and torsion springs used together provide more lifting force (col.1, ln.31-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add to the balance disclosed by Nakanishi, a tension spring as taught by Decker, to provide more lifting force.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN889064 to Taylor discloses a window screen.

USPN2041646 to Larson discloses a window sash balance.

USPN2415614 to Tappan discloses a sash balance.

USPN2776447 to Addicks discloses a spring balance.

USPN2825088 to Decker discloses a double helix sash balance.

USPN3330071 to Kubisiak discloses a window regulator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Y. Ho whose email address is thomas.ho@uspto.gov and telephone number is (703) 305-4556. The examiner can normally be reached on M-F 9:30AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (703) 306-4115. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9326.

WILLIAM MILLER
PRIMARY

TYH
March 19, 2003